



George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

QD-QE-013
REVISION C

EFFECTIVE DATE: September 24, 2004

ORGANIZATIONAL INSTRUCTION

Software Quality Assurance Software Acceptance and Delivery Support

OPR(s)

OPR DESIGNEE

QD10,QD20,QD30,QD40

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		10/13/00	
Revision	A	9/09/02	Format and numbering change to implement requirements of QD-A-001 rev F.
Revision	B	09/18/03	Changes made to incorporate new QD40 Organizational name
Revision	C	09/24/04	Revised to bring document in compliance with the HQ Rules Review Action (CAITS: 04-DA01-0387). Changes were also made to reflect S&MA organizational name changes (i.e., QS to QD).

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Software Quality Assurance Software Acceptance and Delivery Support

1.0 PURPOSE, AND APPLICABILITY

1.1 Purpose - This organizational instruction defines the Software Assurance representative's requirements in supporting the program/project software acceptance and delivery process.

1.2 Applicability - This organizational issuance is applicable to Safety, Reliability, and Quality Assurance Policy and Assessment Department (QD40) associated with software quality assurance for applicable software.

2.0 DOCUMENTS (Applicable and/or Reference)

2.1 Applicable Documents

QD-QE-008 SOFTWARE ASSURANCE STATUS REPORT

2.2 Reference Documents

QD-QE-009 SOFTWARE ASSURANCE REVIEW/APPROVAL OF TECHNICAL DOCUMENTS

QD-QE-011 SOFTWARE QUALITY ASSURANCE SOFTWARE AUDITS

QD-QE-012 SOFTWARE QUALITY ASSURANCE SUPPORT OF FORMAL SOFTWARE TESTING

3.0 DEFINITIONS

3.1 Acceptance - Is the transfer of ownership for the product. Acceptance occurs at the completion of the release process and is normally accomplished by processing a DD form 250.

4.0 INSTRUCTIONS

MSFC and their contractors are required to generate and document their software delivery process/procedures. This process/procedures can be documented as part of the Software Configuration Management Plan. The software delivery process/procedures define management and control of the release of software products and associated documentation. This instruction covers the three separate processes associated with the acceptance and delivery of software products. These processes are defined as follows:

- a) Review of contractor's delivery process/procedures.

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b) Safety, Reliability, and Quality Assurance Policy and Assessment Department (QD40) Software Quality Assurance involvement in the delivery process.

c) Software Acceptance Data Package

4.1 Review of contractor's delivery process/procedures - The Software Assurance representative shall review the contractor's delivery procedures to determine that:

a) All approved changes are provided to the build and delivery organizations.

b) Both the configuration management and SQA organization verify that the contents of the software product to be delivered contain approved changes only.

c) A Software Version Description (SVD), or similar, is generated for each delivery.

d) The SVD, or similar, provides a complete description of the delivered package.

e) All associated specifications and supporting documentation are updated to reflect the changes in the delivered package.

f) Configuration Management records are checked to determine complete implementation of all approved changes associated with the delivery. Traceability exists between the approved changes to the software, to the specifications, and support documentation.

g) All associated test records are evaluated to assure traceability to the Software Requirements Specification(s).

h) Any and all waivers/deviations to the specifications are identified and their approval verified.

i) Each software product delivered contains an authorized signature list, and that this list is maintained.

j) Document the results in a SA Status Report per QD-QE-008.

4.2 Safety, Reliability, and Quality Assurance Policy and Assessment Department (QD40) Software Quality Assurance involvement in the delivery process - Prior to delivery, the Software Assurance representative shall conduct a formal review or equivalent. The review shall ensure that the contractual requirements have been satisfied by verifying the following:

a) Software requirements have been adequately verified.

b) All change documentation associated with the software documentation products have been approved and/or dispositioned.

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- c) User/Operator manuals/procedures were compatible, though demonstration, with the software during testing.
- d) Specifications and associated documentation have been updated to reflect all approved changes associated with the software delivery.
- e) Configuration management status records are complete, showing status of proposed changes and traceability of all approved changes.
- f) All open issues and/or actions are identified.
- g) Document the results in a Software Assurance Status Report per QD-QE-008.

4.3 Acceptance Data Package (ADP) - The Software Assurance representative shall perform the following activities when evaluating and/or approving a software acceptance data package:

- a) Review the Statement of Work (SOW) and the DRD/DRL to determine the contractual requirements regarding the software acceptance data package.
- b) Verify the data package includes the following approved documents, when contractually required:
 - 1) DD form 250 or equivalent.
 - 2) Special instructions, notes/concerns, for the software user.
 - 3) Authorized nonconformances to the contract and/or requirements allowing for identified approved deviations to the software parameters being delivered.
 - 4) Copies of all nonconformances that record the anomalies found during acceptance testing and use of delivered software items.
 - 5) All open work, development, test, or activities remaining to be completed at time of delivery.
 - 6) Detailed description of the work authorized for completion after delivery.
 - 7) Listing of software specification documentation, including date and revision numbers.
 - 8) Source code for all programs, subprograms, tasks, and program modules. This shall be delivered in an electronic stored format.
 - 9) System's Operating Manual.

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- 10) Documented evidence that the delivered software meets requirements.
- c) Document evaluation in a SA Status Report per QD-QE-008.
- d) Upon completion of the software acceptance data package, the Software Assurance representative will sign off on the approval page, if required.

5.0 NOTES

None

6.0 SAFETY PRECAUTIONS AND WARNING NOTES

None

7.0 APPENDICES, DATA, REPORTS, AND FORMS

None

8.0 RECORDS

None

9.0 TOOLS, EQUIPMENT, AND MATERIALS

None

10.0 PERSONNEL TRAINING AND CERTIFICATION

None

11.0 FLOW DIAGRAM

None

12.0 RESPONSIBILITIES

Work accomplished within the scope of this organizational instruction will be performed by the Software Assurance representative. The Safety, Reliability, and Quality Assurance Policy and Assessment Department (QD40) may delegate the responsibilities and tasks provided in this organizational instruction to support contractors who are responsible for carrying out the tasks identified herein.